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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,500	09/12/2000	Aaron D. Hanson	2452-16	6594
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NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
			EXAMINER	
			PRIETO, BEATRIZ	
			ART UNIT	PAPER NUMBER
			2142	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/660,500

Applicant(s)

HANSON ET AL.

Examiner

Prieto B.

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-27 and 30-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-27 and 30-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to amendment filed 11/21/05, claims 21-27 and 30-52 have been examined and remain pending.
2. Claim 26 is objected to due to the following minor informality: "said plural further, disjoint network segments", seem to lack antecedent basis. Correction is required as well as the review of further claims for similar deficiencies.

Further, dependent claims 24-25 at least, should further limit the method claim 21, thereby, should typically make reference to "the method of claim 26" as opposed to "a network as in claim 21". Further, dependent claim 30 at least, should further limit the method claim 26, thereby, should typically make reference to "the method of claim 26" as opposed to "the process of claim 26".

Claim 33, at least, refers to a "mobile end system", lacking antecedent basis. Correction is required as well as the review of further claims for similar deficiencies.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 21 is rejected under 35 USC 103(a) as being unpatentable over Perkins (US 5,412,654) in view of Moore et. al. (US 5,530,963) (Moore hereafter).

Regarding claim 21, Perkins teaches a system and method for communication over disjoint networks segments, the method comprising:

using first address data (e.g. link-layer and/or network layer addressing) identifying a node to communicate between the destination node and a mobile system (col 4/lines 44-62, col 8/lines 53-58),

wherein the destination node is different from the mobile (host) system (col 5/lines 8-9) or on a different network segment interconnected via intermediate nodes (col 3/lines 66-col 4/line 11);

sources and destinations are hosts located on either the same subnetwork or on connected LANs (col 1/lines 40-45), i.e. disjoint network segments;

wherein the destination node communicates with the mobile system over a first over a first network (col 5/lines 14-18); and wherein the destination node communicates with the mobile system over a second network (col 4/lines 33-43, col 5/lines 14-18);

sending to the mobile system over the first network routing information (col 4/line 68-col 5/line 9), said information further including second data identifying the node on a second network disjoint from the first network identified by a different link layer address (col 5/lines 41-44);

using said routing information to communicate between the mobile host and the node using routing information including the paths/routes between the mobile host and the node (col 6/lines 45-57) including using second data to communicate with said node over said different link-layer address (col 5/lines 41-51); although Perkins discloses where mobile computers communicate between each other computer not within the range for direct communication using computers that perform routing communication functions acting as intermediate points, as well as network points of attachment called base stations, he does not denote these network computing devices as nodes.

Moore teaches a method for improving communication over disjoint network segments within a plural segment local area network between mobile (host) workstations (24 and 26) and host/server devices (nodes 18, 20 & 22) (col 1/lines 1-33),

where individual network segments (12, 14 and 16 of Fig. 1) are interconnected by a router devices (node) (28 & 30) (col 2/lines 52-54, col 3/lines 64-67) (i.e. disjoint network segments); further teaching

storing first data identifying the node to communicated data frames over a first network segment between the node and said mobile host (col 7/lines 54-61);

using data identifying the node and the mobile host to communicate (col 1/lines 48-55);

utilizing the stored information for communicating between the mobile host and the node (col 20/lines 10-15), the stored information comprising the originating and destination address, the originating segment and the destination segment (col 19/lines 15-23, Fig. 5b) including

utilizing the stored data (86) for communicating between mobile host (36) over a first network segment (14) and node (18) over a second network segment (12) as shown Fig. 5B.

It would have been obvious to one of ordinary skill at the time the invention was made that the computer devices performing the routing functions discussed by Perkins are routers, as exemplified by

Moore, thereby extant in the Perkins system. One would be motivate given the suggestions of Perkins for enabling the communication between a mobile host and a node over a interconnected routes/paths using addressing information identifying the mobile host and node as well as routes thereto to utilize the teachings of Moore also utilizing this data for communicating between a mobile host over a first network segment and node over a second network segment. One would be motivated to utilize the teachings of Moore for providing generating data identifying the node to communicate over a first network segment by a mobile host and further data identifying the node to communicate on a second network disjoint from the first network segment by mobile host, with the mechanism in Perkins for updating said generated data dynamically upon changes in the network topology including the roaming of mobile host. One would further be motivated to utilize the teachings of Moore as an alternative method which stores the first and further data identifying nodes used in both systems, to be further stored in the intermediate devices/router, as suggested by Moore to eliminating the alteration of the control applications within the mobile host or nodes and maintaining said information transparent to these devices.

5. Claims 22-27 and 30-52 are rejected under 35 USC 103(a) as being unpatentable over Perkins in view of Moore, as applied on claim 21, in further view of Schellinger (US 5,488,649).

Regarding claim 22, the combined teachings of Perkins and Moore do not explicitly disclose the use of authenticating mechanisms.

Schellinger teaches authenticating the mobile system for authorization to communicate with the node over the second network before sending the further data to the mobile system over the first network. Specifically, allowing communication link once between the base station and the mobile host when both the base station and the mobile host have been authenticated (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made given the suggestion of Perkins for implementing an network architecture based on the Defense Data Network architecture standard for Internet Protocol which supports the interconnections of network segments to utilize some type of authentication mechanism both to prevent the exposure of the systems resources to unauthorized individuals including the use of the cellular services discussed in the Perkins system, which typically cost more than wireless telephone based service, there the collection of revenues being a required, as suggested by Schellinger. One of ordinary skill would be motivated to utilize the authentication methods disclosed by Schellinger to ensure that the mobile host is allowed to operate on the communication system and the authorization and call routing equipment is allowed to allocate spectrum of the communication system by permitting authorized mobile host to operate on the

communication system disjoint network segment and the authorization and call routing equipment is allowed to allocate spectrum of the communication system on the disjoint network segment and not permit non-authorized the mobile host to operate on the communication system and not permit non-authorized call routing equipment to allocate spectrum of the communication system.

Regarding claim 23, sending “distributed interface” data to the mobile system over the first network, receiving by the mobile station coupled to the first network segment sent information over the first network segment (Perkins: col 5/lines 1-20).

Regarding claim 24, said mobile system including a network interface adapter attaching the mobile system to said first network and via the intermediate device/node router to the second network (Moore: col 1/lines 14-16 and col 4/lines 28-38).

Regarding claim 25, said first network comprises a radio frequency transceiver station (32/34) (network point of attachment) enabling said mobile system to communicate wirelessly with the network point of attachment (Moore: col 2/lines 54-60).

Regarding claim 26, this method claim comprises limitation(s) substantially the same as those discussed at least on claim 1, same rationale of rejection is applicable. Further limitation(s) include:

the mobile system as discussed on claim 1, is further claimed in the plural form, i.e. here denoted mobile computing systems (Moore: Figs. 5) and plural disjoint network segments (Moore: col 3/lines 64-67);

establishing communications between the mobile computing systems and the network node via a first network segment (Moore: col 19/lines 1-14);

sending the mobile computing systems, via the first network segment, information for use in communicating with said network node via plural further network segments (e.g. hops) at least some of which are disjoint from the first network segment (Moore: Fig. 5C, col 3/lines 64-col 4/line 9). As discussed on claim 21, One of ordinary skill would be motivated to utilize the authentication methods disclosed by Schellinger, discussed above, to ensure that the mobile host is allowed “condition access” to operate on the communication system, e.g. respective disjoint networks segment(s) and the authorization and call routing equipment is allowed to allocate spectrum of the communication system by permitting authorized mobile host to operate on the communication system disjoint network segment and the authorization and call routing equipment is allowed to allocate spectrum of the communication system on

the disjoint network segment and not permit non-authorized the mobile host to operate on the communication system and not permit non-authorized call routing equipment to allocate spectrum of the communication system “protect from unauthorized” communications.

Regarding claim 27, the information sent to the mobile computing system (mobile system, as discussed on claim 21) comprises data utilized for to communicate between a transmitting/source mobile host to a destination/receiving node (Perkins: sending to the mobile system over the first network said routing information, col 4/line 68-col 5/line 9 and col 6/lines 45-57, said information data identifying the node on a second network disjoint from the first network identified by a different link layer address and identifying the mobile host on the first network segment col 5/lines 41-44 and Moore: first data identifying the node to communicated data frames over a first network segment between the node and said mobile host col 7/lines 54-61 information including the originating and destination address, the originating/first segment and the second/destination segment col 19/lines 15-23, Fig. 5b and further hops Fig. 5A).

28-29 (Canceled)

Regarding claims 30-31, these claims are substantially the same as claims 22 and 24, respectively, same rationale of rejection is applicable.

Regarding claim 32, the mobile computing systems are configured to roam onto any disjoint network segment and select an address to communicate with a node over said segment to which it has roam to (Perkins: col 6/lines 45-57 and col 5/lines 41-51).

Regarding claims 33-37, selects said network address based on a metric, hops (Perkins: col 7/lines 1-5), cost, availability (Perkins: abstract).

Regarding claim 38, this system claim comprises features substantially the same as those discussed on claims 21 and 26, and/or 24 and 31, same rationale of rejection is applicable. Further, feature(s) include a “data transmitter” coupled the first network segment for the sending/received data over said network segment to/from the mobile system (Moore: col 1/lines 14-16 and col 4/lines 28-38).

Regarding claims 39-42, these claims are substantially the same as claims 22-25, same rationale of rejection is applicable.

Regarding claim 43, this system claim comprises limitation(s) and/or features discussed on claim 21, 26 and 38, same rationale of rejection is applicable.

Regarding claims 44, 45-47, these system claims are substantially the same as method claims 23, 22, 24, and 32 discussed above, same rationale of rejection is applicable.

Regarding claims 48-52, these system claims are substantially the same as the method claims 33-37 discussed above, same rationale of rejection is applicable.

Response to Arguments

6. Applicant's arguments, filed with the above-mentioned amendment, with respect to the rejection(s) of at least claim 21, as now amended, have been fully considered and are persuasive. The previous rejection has been overcome by the claim amendment filed, the rejection has been thereby withdrawn.

In this case, clarified invention as claimed and as at least disclosed on pages 104-106, has been fully considered. However, upon further consideration, a new ground(s) of rejection is made in view of Perkins in view of Moore.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (571) 272-3902. The Examiner can normally be reached on Monday-Friday from 6:30 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Andrew T. Caldwell can be reached at (571) 272-3868. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
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February 21, 2006

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2/21/06